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Back to School with COVID, extreme weather, dirty indoor air, and deep learning losses

✓ Remote Class Exacerbated Inequalities, UNESCO Report Says

An "ed-tech tragedy" from unprecedented reliance on technology that hindered low-tech alternatives

New York Times, September 7

✓ A heat wave and lack of air conditioning disrupt school districts nationwide

NPR Morning Edition, September 6

✓ Bad Ventilation Remains Threat to U.S. Students: Federal Aid Unused

New York Times, page 1, August 27

✓ COVID-19 surge causes Districts in Kentucky, Texas, and Chicago Public Schools closures

ABC News August 25

✓ Why Haven't We Made It Safer to Breathe in Classrooms?

Investigation reveals schools purchased questionable room air cleaners that may harm, not help, children.

New York Times, Opinion, August 13

✓ CDC calls for five air changes of clean air per hour (ACH) in classrooms, MERV 13 filters

to reduce the risk of infections including COVID-19.

Federal Centers for Disease Control and Prevention, updated guidance, May 12

Children's Emergency Issue: COVID and Climate and Schools

COVID-19 revealed anew the poor state of indoor air in schools and childcare. Concerns about the dire indoor environmental conditions of America's public schools have been well documented for decades, as have the adverse impact these failed indoor environments have on vulnerable children and on personnel. The US has 100,000 public school buildings enrolling some 50M children (about twice the population of Texas): about half of all children are of color and or on subsidized meal plans. Children are uniquely vulnerable to environmental health hazards, for example, they breathe more air per pound of body weight than adults and have different breathing zones, and therefore exposures, and cannot identify or articulate exposures. Schools are also more densely occupied than nursing homes. CDC has found that 40% of all school-age children have one or more existing chronic health conditions, including asthma, a leading cause of school absenteeism. Nationally, in a classroom of thirty children, about three are likely to have asthma.

Climate-related events, like high heat, wildfire smoke, flooding, and tornadoes, also impact children and schools. High heat interferes with learning and depresses test scores. Schools close rather than endure stifling classrooms; playground and equipment surfaces can cause second degree burns. The extreme weather patterns are leading to more air pollution and asthma, more pests, and more infectious diseases, and are predicted to lead to more frequent pandemics.

Public schools currently provide over eight billion square feet of learning space valued at over \$3 trillion (about \$9,200 per person in the US). It is not simple to do major repairs to or to rebuild school facilities, yet school infrastructure is not pandemic or climate resilient, leading to more closures in addition to COVID.

Schools Are Critical

Keeping schools open and keeping children connected have emerged as prime concerns post-COVID, because schools sustain learning and because they support healthy social and emotional growth in children and youth, especially for the highest risk students. Education is a social determinant of health. Schools are also critical to their communities, to parents, and to the nation's economy, so school closures must be minimized. Thus, the environmental conditions of these facilities are an urgent need that demands a broad, coordinated, and sustained response.

Over twenty years of published research has shown that indoor environmental exposure to pollutants can be more intense than outdoor exposures and that school facilities have been neglected for decades. These are problems affecting children and their families/caretakers, particularly in communities most in need, and affecting personnel, the health care system, and school functioning. Poor indoor environments in schools decrease seat time, attendance, and test scores, and increase asthma and other health events, and thus increase health costs.

Prolonged school closures we now see are associated with significant learning losses that are not resolving quickly, and in fact, are deepening. They are also associated with loss of connectiveness to school and to age-group peers, and thus to escalating mental health and behavioral issues among children and youth.

It is clearer than ever that federal and state funds for school facilities must be matched with the knowledge of how to use funds effectively and efficiently. There is therefore an urgent and significant need to educate, train, and encourage schools and childcare facilities on child-safe and effective, preventive management of facilities.

Solution to Improving School Indoor Air = Education and Training

US EPA is the only federal agency with an Indoor Environments office and an Indoor Air Quality program that has addressed k-12 schools. EPA coordinates the federal interagency Indoor Air Quality Council. It has the existing authorizations, programs, and staff expertise to educate and train schools, school stakeholders, and communities on how to prevent problems with indoor air in schools and or how to identify and effectively address problems when they do arise, sometimes without recruiting outside consultants. Having clean, breathable indoor air requires knowledge and continuous management: buildings do not breathe on their own and do not maintain themselves.

EPA's years of proven successes with school environments and indoor air arose not from top-down grants, but from the agency's early strategic decision to invest its grant money in educating and training stakeholders in the education, public health, and environment sectors.

EPA's extensive array of field-tested guidance and best practices for school facilities for state agency use and for local school use is available at www.epa.gov/schools, refined over two decades by national and regional convenings. Congressional budget cuts severely damaged the popular indoor air program a decade ago and were not restored, let alone expanded, during the pandemic, an inexplicable lapse. We appreciate congress' efforts to dedicate significant new resources to help low-income communities and to provide resources directly to public schools, yet utilization is far below expected, due largely to the absence of EPA's field outreach work. Proven guidance should work in tandem with federal funds.

Today, too many education leaders and decision-makers lack sufficient time or knowledge to take advantage of the increased federal investments available for facilities, and the most rural and low-income schools cannot afford or even find and recruit top facilities personnel or consultants to assess needs and devise technical plans for facility funding.

Congress Must Act: There Is No Better Time Than Now

Now is time for congress to rebuild and sharpen the knowledge base on creating healthful indoor and outdoor environments for k-12 schools and childcare facilities. There is no better time to start than now. Facilities must become more resilient to extreme weather and infectious diseases, able to stay open longer and to reopen quickly and safely post disasters, for years to come, and that requires at a minimum clean indoor air.

<u>The FY 23 IAQ in Schools Emergency</u> is adversely impacting children's health, thinking, behavior, and learning across the nation. It will not disappear on its own.

<u>It will continue into FY 24</u> and well beyond without a decision by congress to provide robust funding to EPA. The appropriators should direct US EPA to use \$100M of its top-line budget to address IAQ in Schools and an additional \$10M to restore children's environmental health protection.

Of the \$110 million needed for EPA, \$100 million should be dedicated to funding school-specific tools, technical assistance, and other support for schools through EPA's Indoor Air Quality Program. We urge that half of those funds be allocated to states, tribes, cities, and NGOs to provide outreach, training, and technical assistance to help

school communities. This funding will improve monitoring and benchmark improvements to indoor environments, consistent with the White House Clean Air in Buildings Challenge. We also recommend the remaining \$10 million in funding be used for EPA's Office of Children's Health Protection to restore investment in Centers of Excellence in Children's Environmental Health (co-funded with NIEHS), support research on children's risks and exposures in school and childcare facilities and expand the national network of Pediatric Environmental Health Specialty Units.

Linked References

Coalition for Healthier Schools 90 NGOs sign-on letter to US EPA Administrator January 2023 US Senator Gillibrand dear colleagues' letter to Appropriators, April 2023

For more information:

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